

IN THE CLAIMS:

The following listing of the claims replaces all earlier listings and all earlier versions.

1. - 30. (Canceled).

31. (Previously Presented) A method of driving a solid image pickup device comprising a photoelectric conversion unit, a charge-voltage conversion unit for converting electric charges from the photoelectric conversion unit into voltage signals, a signal amplification means for amplifying the voltage signals generated in the charge-voltage conversion unit, and a charge transfer means for transferring photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, said method comprising the steps of:

performing a primary transfer operation to transfer at least a part of the photoelectric charges accumulated in the photoelectric conversion unit during a charge accumulation period, from the photoelectric conversion unit to the charge-voltage conversion unit; and

performing at least one other transfer operation, prior to a subsequent charge accumulation period, to transfer remaining photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, wherein the photoelectric conversion unit is not reset prior to the at least one other transfer operation.

32. (Previously Presented) The method of driving a solid image pickup device according to claim 31, wherein output signals read out from the charge-voltage conversion unit following the primary transfer operation and the at least one other transfer operation are retained, respectively, and added, and a resulting summed output signal is outputted from a horizontal scan circuit to a common output line.

33. (Previously Presented) The method of driving a solid image pickup device according to claim 31, wherein after the primary transfer operation and before the at least one other transfer operation, at least one intermediate readout operation is performed by resetting the charge-voltage conversion unit and reading out an output signal amplified by the amplification means to a signal output line.

34. (Previously Presented) A solid image pickup device comprising:

- a photoelectric conversion unit;
- a charge-voltage conversion unit for converting electric charges from the photoelectric conversion unit into voltage signals;
- a signal amplification means for amplifying the voltage signals generated in the charge-voltage conversion unit;
- a charge transfer means for transferring photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit; and
- a control circuit for controlling the solid image pickup device to perform a primary transfer operation to transfer at least a part of the photoelectric charges

accumulated in the photoelectric conversion unit during a charge accumulation period, from the photoelectric conversion unit to the charge-voltage conversion unit, and to perform at a least one other transfer operation, prior to a subsequent charge accumulation period, to transfer remaining photoelectric charges from the photoelectric conversion unit to the charge-voltage conversion unit, and wherein the photoelectric conversion unit is not reset prior to the at least one other transfer operation.

35. (Previously Presented) The solid image pickup device according to claim 34, wherein the photoelectric conversion unit is an embedded-type photodiode.

36. (Previously Presented) An image pickup system comprising:
a solid image pickup device according to 34;
an optical system for focusing a ray of light to the solid image pickup device; and
a signal processing circuit for processing output signals from the solid image pickup device.

37. (Previously Presented) An image pickup system comprising:
a solid image pickup device according to 34;
an optical system for focusing a ray of light to the solid image pickup device;

a mechanical shutter for determining an exposure time of the solid image pickup device; and

a signal processing circuit for processing output signals from the solid image pickup device.